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LESSONS FROM THE PAST: RESPONDING TO INFECTIOUS DISEASE OUTBREAKS

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A recent conference in Singapore organised by the S. Rajaratnam School of International Studies examined the worldwide response to the outbreak of H1N1 influenza last year. The lessons learnt from earlier outbreaks, such as SARS in 2003, are more limited than had been assumed.

OUTBREAKS OF infectious disease have a global impact. So, no matter how well prepared a country may be, it is still dependent on the actions of its neighbours. This provides a good reason for all to be well prepared and ready to cope – making international cooperation a critical factor.

It is with this rationale in mind that some one hundred experts and officials from across Asia and beyond, including high-ranking representatives from the United Nations and the World Health Organization (WHO), met in Singapore recently to discuss measures to improve their systems. Central to their discussions were the responses -- both health and non-health -- to the worldwide outbreak of H1N1 influenza. Some key questions were debated: What did the pandemic alert last year accomplish? How much did the efforts cost? Were health officials right to use the terminology they did? And, how much attention did providers and publics pay to them anyway?

SARS: not a good model

New public health measures emerged in Asia subsequent to the first outbreak of H5N1 avian influenza in Hong Kong in 1997. Then, after the anthrax incidents in the United States, soon after the 9/11 terrorist attacks there, governments worldwide started to pay more attention to the possibility of, and need to be able to cope with, biological threats. The outbreak of an unexpected virus, SARS, in 2003 then allowed countries to test these new procedures and look towards implementing better ones. But, as attendees at the conference organised by the Centre for Non-Traditional Security Studies of the S. Rajaratnam School of International Studies at NTU learnt, SARS may not have been a particularly useful model.

SARS was unique. It had a different pathology to H1N1, as indeed do other forms of influenza. Accordingly, the use of thermal scanners to detect cases at border entry points across the region yielded no detections this time around; it could only be justified by some officials as a supposed means to reassure the public that something was being done.

Margaret Chan, who heads WHO and was previously Director of Health for Hong Kong, had been criticised then for not acting swiftly enough to tackle the outbreak of SARS there. So now, on raising the WHO's six-point alert-level for pandemics from level 4 to level 5 on 29 April last year, she announced: "It really is all of humanity that is under threat," moderating her language only somewhat the following month prior to announcing a full-blown pandemic in June.

Accordingly, countries went into response overdrive. China, the country that probably faced the most international criticism in relation to SARS for failing to report suspected cases, did the most. It erected what one conference participants called 'a great wall against the virus'. Towards the end of May last year, all passengers on inbound flights were subjected to screening by technicians clad head-to-toe in biohazard suits. Anyone found with a higher than normal temperature would lead to the entire flight being quarantined.

Time: the critical dimension

None of these measures, including social-distancing through the closure of schools and other public facilities, can be held to have 'worked'. Intriguingly, some countries with fewer protections in place also noted significantly fewer cases, although this may have more to do with different reporting procedures, as well as the need to maintain various political and reputational agendas.

The former Chief Scientific Advisor to the United Kingdom's Ministry of Defence, Professor Sir Roy Anderson, showed a computer model of viruses and the speed of their global spread. It seemed to suggest that, at best, what countries can do is 'buy time' by delaying the full onset of an outbreak, and thereby allowing scientists to develop a vaccine. The key was to switch from containment to mitigation, but also to take the time to explain this move carefully to the public, as happened in Singapore.

The more apocalyptic pronouncements of some officials could also have been contained. As one delegate lamented, there is a growing tendency among public health professionals 'to reach for the megaphone' and seek to conduct their affairs through the media at such times. In the long run, this could only damage the reputation and institutions of science. It could also demoralise the countless primary care providers all countries truly rely on.

The low uptake of vaccination for H1N1, particularly among the populations of Western countries that had stockpiled vast quantities of the antiviral drug Tamiflu, was also discussed as a cause for concern. Maybe, it was suggested, this had been the only active way in which people could register their opposition to the way the episode had been managed.

Certainly, politicians in France and Germany, as well as elsewhere, are now expressing their concerns as to the huge expenditure poured in this direction. The French, in particular, according to some sources, expended nearly two billion euros in this exercise, amounting to three times the allocation for cancer research in that country over a four-year period.

What about the future?

How then, should officials manage such incidents, caught, as they are, between the equally unappealing poles of being accused of having done too little too late, or too much too soon, and thereby alarming the public either way? Certainly, all at the conference were in agreement that much

more ought to be done in terms of improving laboratory capacity across the region. When a future infectious disease does become manifest, this is what will be the key -- along with an adequate supply of trained and equipped doctors and nurses, and an infrastructure to match.

Poverty, however, remains the single clearest indicator of future health problems, both for individuals and countries. Accordingly, it might not be too much to hope more from those richer nations that are currently concerned by the lack of preparedness of their neighbours for dealing with such a situation. But what they could do is put more effort into ensuring growth and economic development, rather than try to anticipate the unknown elements of pandemics that have yet to emerge.

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